The Harbinger

Newsletter *of the*
Illinois Native Plant Society

Spring 2020
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"...dedicated to the study, appreciation, and conservation of the native flora and natural communities of Illinois."

Bloodroot (*Sanguinaria canadensis*). Photo by Paul Marcum.

Lots of things have changed since the last newsletter. The native plant sales, indigenous plants symposium, and annual gathering have all been cancelled due to the COVID-19 pandemic. Social distancing has required many in-person events to go online so this issue contains links for several webinars, videos, and articles that you might find interesting. ꕥ Chris Benda, Editor

In This Issue

Message from the President

Our Board had another enjoyable retreat in Springfield, courtesy of Illinois Audubon's facilities and our Springfield members. It was nice to have so many positive events to discuss. If you haven't seen our website lately, you're missing out. Our wondrous webmaster Jeff Nelson has really transformed the site and moved us to our new IllinoisPlants.org domain.

Once again, we discussed the possibility of having a paid staff person with no conclusion reached. We decided to form a committee to discuss whether we wish to hire a staff person and what their tasks would be. At this time, nearly 100% of our money goes toward our programs, with administrative costs limited to PayPal and a few miscellaneous expenses involving the website and publishing (see financial statement on page 6). If you have any thoughts on this issue, feel free to contact me at fcatchpole@comcast.net. Be sure to put INPS hire (or something similar) in the subject line.

One of the great things about INPS is that it is a grass roots organization. Our mission is to *promote the study, appreciation, and conservation of the native flora and natural communities of Illinois.* The State Board sets policy and guidelines for the chapters, but the chapters have a fair bit of autonomy. If members have ideas to promote our mission, they should approach their local chapter, or the State Board and present their ideas. One note is that the INPS Board decided some years ago that we would not purchase land for conservation. There are other organizations fulfilling that role.

Many chapters have needs and desires that members can fulfill. Field trip leaders, website posters, and speaker wranglers are some positions that seem chronically difficult to fill. The INPS website has a page for each chapter and there is plenty of opportunity to add material beyond simply updating the calendar of events. It seems hard to imagine having too many field trips, and, in my experience, speakers at the chapter meetings really help inspire attendance.

Here's to hoping that we will have plenty of field trips and meetings this summer. It's hard to predict at this time. So, if you are a little bored at home, go to the Central Chapter website and view some of the great speaker videos they have made. Also, Henry Eiler's blog can be found there.

Floyd Catchpole,

President INPS

The INPS governing board met 2/29 at Illinois Audubon Society's Adams Wildlife Sanctuary in Springfield for our annual board retreat. We have some new board members so it was great for everyone to meet each other in person. Many initiatives were discussed and we are excited for another great year!
Front row left to right: Angela Kerber, Secretary; Susanne Masi, Vice President; Floyd Catchpole, President; Janine Catchpole, former President; and Joe Armstrong, Grand Prairie Chapter President.
Back row left to right: Courtney Cartney, Treasurer; John Taft, *Erigenia* Editor; Connie Cunningham, Forest Glen Chapter President; Jean Sellar, At-large Board member; Gretel Kiefer, At-large Board member; cassi saari, Northeast Chapter President; Emily Dangremond, At-large Board member; Bo Dziadyk, Quad Cities Chapter President; Trish Quintenz, Central Chapter President; Jeff Nelson, Webmaster; Anna Braum, At-large Board member; Chris Benda, *Harbinger* Editor and former President; and Paul Marcum, Past President.

INPS Chapters

CENTRAL CHAPTER
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Trish Quintenz (President)
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SOUTHERN CHAPTER
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Check out the Illinois Native Plant Society Events Calendar for Chapter meetings and workshops.

Welcome New Members

Central Chapter
Randy Belville
Glenda Brown
Leann Flesch
Susan Helm
Tiffany Larson
Mary McKee-Doak
Jo Ann McNaughton-Kade
Kelly Neal-Wilker
Georgine Stephens
Keith Tuxhorn

Grand Prairie Chapter
Monica Adams
Pat Alexander
Ellen Denler
Dottie Roseboom
Ann Schreifels
Shannon Unzicker

Southern Chapter
Kathleen Carl
Barbara Crandall-Stotler
Diane Falk
Christina Feng
Wayne Garrett
Liz Garrett
James Hill
Phyllis Oliver
Rebecca Wisdom

Forest Glen Chapter
Mary Herrington-Perry
Eric Janssen

Kankakee Torrent Chapter
William Bromer
Rachel Moreno

Quad Cities Chapter
Jay Dirks
Monae Verbeke

Northeast Chapter
David Brown
Chris Burkhart
Katherine Doranski
Lisa Draper
Eriko Kojima
David McKirnan
Anthony & Carol Niec
Caitlin Patterson
Mary Peranteau
Heather Prince
Phyllis Schulte
Ingrid Schulze
Jeff Skrentny
Jeffery Steele
Theresa Steinbach
Bonnie Tawse
Lori Upchurch
Rafael Urbina Casanova
Imeña Valdes

INPS News

INPS 2020 Research Grant Awards Announced

The Illinois Native Plant Society offers sincere congratulations to the awardees of the 2020 Research Grant Program. A panel of eight professional reviewers determined that these applicants met the high standards of the grant criteria and will further our mission "to promote the study, appreciation, and conservation of the native flora and natural communities of Illinois." INPS is proud to be able to support significant studies on our native Illinois flora by these students and citizen scientists! Descriptions of the projects will appear on the INPS website.

Rafael Urbina Casanova, graduate student, Northwestern University and Chicago Botanic Garden.

With Co-Principal Investigators Dr. Andrea Kramer, Director of Restoration Ecology, Chicago Botanic Garden; and Dr. Jeremie Fant, Conservation Scientist, Molecular Ecology, Chicago Botanic Garden.

Project: *Assessing reproductive fitness on the plants of concern in the Chicago Region.*

The main objectives of this project are to identify populations experiencing low levels of sexual reproduction and to create a monitoring protocol of reproductive fitness that may be included in the Plants of Concern program of the Chicago Botanic Garden. In order to do so, we will assess two components of reproductive fitness, fruit and seed set, on species with outcrossing breeding systems and clonal growth. These species are reported to be more vulnerable to genetic erosion and to exhibit distorted population trends based only on counting individuals. Populations identified with low reproductive fitness will be considered as candidates for further studies on genetic rescue to reduce their local extinction risk.

Brian Charles, graduate student, University of Illinois Urbana-Champaign.

Project: *Plant species composition, functional traits, and C values in restored riparian wetlands.*

Wetland restoration is a critical service to society, but ecosystem functions and services are often not considered in restoration evaluations. Functional traits offer a window into ecosystem functionality and could potentially be integrated into restoration evaluations to offer a way to account for ecosystem services. We will test this theory using restored wetlands throughout Illinois and compare attributes of community assembly to functional traits. We will also investigate the relationship between functional traits and coefficients of conservatism (C-values), which are numbers assigned to plant species by experts that indicate tolerance to anthropogenic disturbance. This project will provide an opportunity to ground C-values, a commonly used metric in vegetation evaluations, in physical plant characteristics. We are grateful to the INPS for giving us the opportunity to conduct research and look forward to sharing our results.

Anthony Gibson, horticulture student, Joliet Junior College.

With Co- Principal Investigator Andrew Neill, Professor of Biology, Joliet Junior College.

Project: *Floristic survey of the Joliet Junior College Main Campus.*

Three integrated objectives guide the Flora of the Joliet Junior College project: voucher substantiation, ecological analysis, and presentation of findings. Voucher substantiation is defined as the acquisition of a specimen for every vascular plant taxon recognized in our flora. Ecological analysis is an inventory of each zone from fen to parking lot, resulting in a full Floristic Quality Assessment (FQA). Presentation of findings will include a complete taxonomically informed flora within retrospective and contemporary ecological contexts.

Stephen Packard, citizen scientist and site steward, North Branch Restoration Project.

Project: *Control of Solidago altissima in open oak woodlands.*

Tall goldenrod (*Solidago altissima*) is native to North America but spreads aggressively and often must be actively controlled in order to support native plant diversity. Many stewards are searching for effective and appropriate control methods within oak woodlands where light levels have recently increased. Two methods that have shown anecdotal promise are mowing and interseeding native species in *S. altissima* patches. This study will test the effectiveness of mowing and interseeding—used alone and in combination—at controlling *S. altissima* and restoring surrounding floristic quality. We hope to provide actionable advice to stewards looking to restore oak woodland health using accessible, cost-effective methods.

Other INPS Grant News

The INPS Board of Directors at their February board retreat discussed increasing award amounts for the 2021 grant cycle. Competitive Research Grant awards would be available for up to $2,500 and Survey Grant awards for up to $5,000. This increase is made possible by generous donations to the grant fund, proceeds from the 2019 Annual Gathering, and contributions from the general operating budget. Application guidelines and forms will be posted on the INPS website by December 2020, and application deadline will be January 31, 2021.

INPS encourages applications from all areas of the state and from students, faculty, citizen scientists, independent researchers, and non-profit conservation groups.

Erigenia Call for Papers

Erigenia, the scientific journal of the INPS, is seeking contributions from members and the general community of botanists, ecologists, restorationists, conservationists, and native plant enthusiasts. The INPS is dedicated to the preservation, conservation, and study of the native plants and vegetation of Illinois and *Erigenia* is committed to publishing peer-reviewed articles that advance these objectives.

Erigenia is named for *Erigenia bulbosa* (Michx.) Nutt. (harbinger of spring), one of our earliest spring ephemeral species. Its hardy emergence in February and March throughout much of the state serves as a promise of greater botanical riches to come and in that spirit we seek to strengthen the INPS core mission with regular publication of the journal. *Erigenia* was first published in 1982 and to date has a total of 27 volumes (https://illinoisplants.org/erigenia/issues/). Topics for publication include the following:

- Taxonomy of vascular plants, mosses, algae, lichens, and fungi;
- Floristics and noteworthy collections (with voucher specimen citations);
- Ecology of species, communities, and their biotic and abiotic interactions;
- Restoration and management of natural areas;
- Natural history of Illinois including geology and biogeography;
- Ethnobotany of native plants;
- Horticulture as it relates to native plants in restored or cultural environments;
- Biographical reviews of botanists and explorers; and
- Book reviews

There has long been and continues to be a vigorous community of researchers, conservationists, and native plant enthusiasts in Illinois establishing an extraordinary legacy of achievement. However, demands for further service to the cause of biological conservation are increasing, particularly with ongoing threats from climate change and introduced invasive species. Your contributions to *Erigenia* strengthen the capacity to achieve critically important objectives of the conservation community and thus help fulfill a principal mission of INPS. Please forward this call for papers to interested colleagues, researchers, and students. We look forward to your new contributions! You can find instructions for authors and detailed formatting guidelines for manuscripts at https://illinoisplants.org/erigenia/. Send any queries to Erigenia.editor@gmail.com. ∞ John Taft, editor.

2019 INPS High-Level Financial Report

INPS Consolidated Chapters Financial Statements - 2019			
		12/31/2019	**1/1/2019**
Chapter	**Treasurer**	**Balance**	**Balance**
State	Courtney Cartney	$79,908.51	$72,313.66
Northeast	Jason Zylka	$7,779.77	$8,402.56
Kankakee	John Sullivan	$5,435.70	$5,218.25
Quad Cities	Alec Schorg	$2,282.29	$2,194.79
Grand Prairie	Joe Armstrong	$324.00	$278.50
Forest Glen	Ken Konsis	$3,314.51	$3,250.01
Central	Jean Moser	$89,385.94	$76,647.06
Southern	Nancy Garwood	$13,938.75	$11,178.09
Total		**$202,369.47**	**$179,482.92**

2019 Financial Highlights:

We have a healthy amount of cash assets across all chapter accounts with a balance of $202K. At the 2020 board retreat, we discussed how we can utilize our assets to better fulfill our organization's objectives and improve the community. One of those objectives we have already implemented with the introduction of the Grant Fund in 2017 and the first grants being issued in 2018. We issued grant payments in 2019 of $6,700 and will continue to issue another sizable amount of grant payments in 2020. Other major expenses include the cost of issuing our first *Erigenia* publication in several years, funding the annual retreat, sales taxes on plant sales, and *Harbinger* printing. Our income is primarily from membership dues, grant donations, other donations, and plant sales.

We thank all of our readers, members, and other community parties for their membership, general donations, and donations for our grant program.

Should you have any additional financial questions, please reach out to your local chapter president, local chapter treasurer, the state president, or state treasurer.

CHAPTER NEWS

Most state and chapter events have been cancelled including the annual gathering. Please check with your local chapter for current information regarding upcoming events.

How to Win the 2019 Illinois Botanists Big Year Competition: Derek v. Jared

By Derek Ziomber.

I hadn't even planned on participating in the 2019 Illinois Botanists Big Year (ILBBY). I always only had a flip-phone, which made *iNaturalist* less convenient to use. But, at the start of 2019, I was dragged kicking and screaming into the 21st century and was required to get a smartphone for work. I honestly wasn't happy about it, but at least now it would be easier to use *iNat* in the field.

When I first decided to try doing a Big Year, I toyed with the idea of limiting myself to Cook County, the county I know best. This would cut back on a lot of travel time. However, I quickly gave up that idea when a friend told me about some harbinger of spring (*Erigenia bulbosa*) a county over.

Seeing that little plant for the first time and its surrounding habitat made a real impression on me. I had never been in an honest-to-goodness, intact remnant of rich mesic woodland in Illinois before. In fact, I always feel a little upset when I see areas dominated by red oak and sugar maple in my local woods because this is usually a sign of lost biodiversity in the historically prairie and savanna-dominated area I live in. But now I had seen an area where these trees belonged. While I had been to some really wonderful remnant habitats in Illinois before, this plant made me realize that so many of those Illinois plants I'd never seen would only be found in other amazing remnant areas hidden around the state. And seeking out those plants for my Big Year would lead me to new landscapes that would broaden my understanding of Illinois' natural history.

After seeing harbinger of spring, I still thought there was a chance that I might do a Big Year limited to the Chicago Region. This strategy actually would have been enough for me to have won the contest in past years. I had 968 confirmed species from the Illinois section of the Chicago Wilderness Region, while the previous record for the highest species count in the ILBBY is 948 species. Then again, I likely wouldn't have worked as hard at this contest, in northeastern IL or elsewhere in the state, if it weren't for the steep competition in 2019.

That was another factor that led me to broaden my focus. It was quickly apparent that there was another person making a serious run at the contest in southern IL, Jared Gorrell (@wildlandblogger). This complicated things, given the longer growing season in southern IL and relatively high biodiversity there. But, beyond being in a close competition from the beginning of the contest, mine and Jared's paths would end up crossing in a way that neither of us anticipated.

In early April, a friend of mine, Jeff (@skrentnyjeff), suggested an impromptu trip to Snake Road in southern Illinois. With the realization that I'd need any edge I could get if I was serious about the ILBBY, and because why wouldn't I want to go to Snake Road, we planned a quick two-day trip. But Jeff didn't tell me that we'd be meeting Jared there until we were on the road south. Jeff had gotten in contact with Jared through *iNaturalist* in the previous weeks and had already met up with him for some herping and botanizing just a few weeks before our trip. I wasn't sure what to make of Jeff's plan. At this point, I saw Jared only as a rival. I didn't know if this would work out well. But it turned out to be a great trip. I haven't spent much time in the south, and I wasn't very familiar with the flora there. It was great having a knowledgeable person to show us around. Unfortunately, I was now certain that I'd be in for a tough year of botanizing.

This was the first time that I'd been in the south during the middle of the spring wildflower season. I was astounded by how full of blooms the woods were. And the bluffs and talus contrasted drastically with the flat terrain I'm so used to. On every slope there was a plant that I'd only ever read about and seen pictures of, to speak nothing of the abundant amphibians, birds, and snakes. The funny thing is that many of my favorite plants from that trip weren't even blooming yet or were non-flowering plants: buffalo clover (*Trifolium reflexum*), French's shooting star (*Dodecatheon frenchii*), and Mackay's brittle fern (*Cystopteris tenuis*). But, once again, the overall habitat stole the show.

With another series of new plants and habitats explored in southern IL, it was time for spring wildflowers to really begin blooming back up north. Beyond looking for new spring flora, I decided to try to see as many trilliums and violets as I could. There were many IL violet species I didn't find, but I never thought I'd see them all that year. I did think I might be able to see all the trillium species in the state. Unfortunately, despite numerous leads and attempts, nodding trillium (*Trillium cernuum*) and red trillium (*Trillium erectum*) evaded me every time.

By the time that the spring wildflower season was winding down, it was time for the diversity of summer. And orchid season. From a strategic standpoint, the beauty and rarity of orchids didn't even matter. What mattered was that orchids usually grow in diverse habitats with other rare plants. I had seen my fair share of orchids before 2019. But for my Big Year, I had to make an effort to see new ones. For so much of my Big Year, I relied on help from others in order to find the best spots and coolest plants. But that was especially true for orchids. Though there were a few unexpected lucky finds, including the unassuming small green wood orchid

(*Platanthera clavellata*) in a wet-mesic acidic sand prairie where this species apparently may have never been seen before. Still, I have to credit that orchid to a friend, since they actually found it. That was a great day that included two other species of *Platanthera* and tuberous grass pink orchid (*Calopogon tuberosus*), although the last one was only seed pods.

Throughout early summer I continued visiting new natural areas, as well as ones I knew. Sometimes on my own and sometimes with friends. Jared made a few trips to the northern part of the state and Jeff and I returned the hospitality that he showed in southern IL by doing more botanizing together. I also made an effort to go on a few outings set up by INPS, including the Annual Gathering. In all of my exploration, I really came to appreciate fens and sand prairies. Not only do they have amazing plants, but they are so full of insect life. And I have a number of great memories from the year, exploring fens and sand prairies with others who appreciate these fragile environments.

Unfortunately, my car broke down at the end of July, putting a damper on my plans to visit new places. I'd hoped to get to southern IL once more before the year's end. Now I was mostly stuck closer to home. But I didn't let that end my Big Year. I just had to start working harder to find species. For instance, I began exploring alleys, parking lots, railroad rights-of-way, and other highly disturbed areas to look for weeds. I mostly ignored these plants in the past, because natural areas are more interesting than alleys but also because alley plants can be difficult to identify. Pigweeds (*Amaranthus sp.*), in particular, were a big pain in the butt. But I needed to supplement my species count some way. I definitely worried about people wondering why I was creeping around in alleys and vacant lots. But it was all worth it since I found dozens of species that I otherwise wouldn't have seen. It's amazing just how diverse these ruderal habitats can be.

I also used my lack of transportation as motivation to more thoroughly explore parks and preserves in my neighborhood. *iNaturalist* really helped me to do this, especially toward the end of the year. With the year coming to a close, I began searching *iNat* for observations of species that I didn't have for my Big Year yet, but which were within biking distance. Because of this, I was still making observations throughout December, including the night of December 31.

That last week of December was a mad dash to pick up as many extra species as I could. Overall, the end of the year might have been the most difficult part of my Big Year. I still had a ton of photos on my camera, that weren't on my phone, that I had to sift through and post. I also made a point to check as many of Jared's observations as possible. He had been steadily inching ahead at the end of the year and he had over 5,600 plant observations, compared to my 2,000 observations. I figured that the only way that I might catch up was if I start chipping away at his total.

The whole time, my strategy was to minimize the number of observations that I made. I wanted to spend more time in the field looking for new plants and more time at home IDing difficult plants. I didn't want to photograph and create observations of the same species multiple times. This gave me more time to go after difficult groups like willows, grasses, sedges, and alley weeds. But there are distinct advantages to focusing on less cryptic taxa and taking more of a shotgun approach to the ILBBY. Cryptic taxa are far less likely to get confirmed by other *iNat* users, which is a requirement for the ILBBY. It's also super important to make sure your photos clearly demonstrate the identity of cryptic taxa, which can be difficult to do. When you only take one shot at most species, you have to make it count. But, when you have more observations of easier-to-ID taxa, it's more likely that people will see your observations and attempt to ID them.

However, the more observations a person has, the more likely it is that an incorrectly ID'd plant will have someone agree with the incorrect ID. So I ended up double-checking over 3,200 of Jared's observations and identifying over 2,000. Every once in a while, I'd correct a mistake and cut a species off of his total, all while still adding new species here and there to my own count. Yet, in the end, a huge part of why I won was because Jared decided to return the favor and identified a number of my unconfirmed observations.

That's something I really enjoyed about being part of the 2019 Illinois Botanists Big Year. While I'd say that Jared and I developed a bit of a rivalry throughout the contest, that rivalry only pushed us to work harder and learn more. The ILBBY, along with *iNaturalist*, is also why we became friends in the first place. And that's really what this contest is about. Some may argue that botany isn't a competition and that people should seek

knowledge for the sake of knowledge. But even with how intense the competition was, I'd like to think we never lost sight of the point. I also think the competitive aspect of the ILBBY adds an extra level of camaraderie that can't be achieved in botany in many other ways. 2019 was a marathon for me. And I imagine that other people who have seriously attempted a botany big year felt similarly. I have said this many times now. I think that I might have learned more during 2019 than I have in any other year of my life. It was an amazing year, but it was exhausting and I'm glad that I feel as though I can take a break this year. Maybe I'll give the ILBBY another go in the future, but for now I'll be happy to learn about plants entirely for fun and pay forward some of the help that I received during the 2019 Illinois Botanists Big Year.

Derek Ziomber is dziomber on iNaturalist. His life's goal is to learn as much about and experience as much of nature as he possibly can. His focus has been on plants and fungi, but he considers himself an all-round naturalist.

By Jared Gorrell.

I am a recent graduate of Southern Illinois University currently living in central/southern Illinois. I got interested in wildflowers in elementary school and I've been trying to learn them ever since. This year was…intense. I've nicknamed it the "Big Year of Everything" since it involved me actually trying to learn more plants than just the common wildflowers, as well as the local vertebrates, butterflies, dragonflies, and tiger beetles.

I started in January with a procession of birds, mostly, interrupted with a few plants, as I tried my best to photograph winter buds. Once I moved back to Carbondale to complete my final semester of college, I photographed the few green leaves—tangles of feral American holly (*Ilex opaca*), deeply folded leaves of puttyroot (*Aplectrum hyemale*), dried brown stems of beechdrops (*Epifagus virginiana*)—as the gray days and intermittent rains made me drift through the days like a dead leaf, fallen from the stem. The obsessive search for nature helped me to keep going even though I daily felt like giving up.

My greatest solace at the time was my friend whom I got hooked on *iNaturalist*, and I'll use his preferred *iNat* username, kup. Kup and I set off to get birds for him and our travels ranged from the secret island where the whooping cranes winter, to the pine plantations of the hills where red-breasted nuthatches quarreled, and the slag piles of the reclaimed strip mines where golden eagles soared. Along the way, I identified what little I could plantwise. Another friend of mine, Jake (jakeskee on *iNat*) challenged me to join the Illinois Botany Big Year, and I don't think he realized what he was getting into with that challenge. Of course, I definitely didn't either!

We explored many of the Shawnee backroads as the months progressed and spring arrived. March brought with it a flurry of Illinois wildflowers, especially spring ephemerals. I spent much of my time photographing the various ephemerals at Giant City and Larue-Pine Hills.

April brought the flowers, as well as juvenile western mudsnakes, out in the Cache River basin. It also brought in the competition, as Jeff Skrentny and Derek Ziomber came down to look for southern Illinois wildflowers with me. Specifically, I found heartleaf nettle (*Urtica chamaedryoides*) at a site in Union County, and they came down to look for that and other rare species of the region. Derek, especially, being a rather brilliant botanist, and Jeff, having a great reputation as a birder, both terrified me a little that they came down and wanted ME to show them around.

We started out on familiar territory—getting buffalo clover (*Trifolium reflexum*) at Giant City State Park, then trying and failing to get French's shooting star (*Primula frenchii*) in bloom.

We met up at the parking lot of a Dairy Queen in Anna, Illinois, from which I proceeded to miss my turn west. Yay. Eventually, we made it to Larue-Pine Hills, where I got to show them everything from the state-listed heartleaf nettle to the state-threatened northern starhead topminnow (*Fundulus dispar*) to the northern cottonmouth (*Agkistrodon piscivorus*) for which Snake Road gets its colloquial name. Resurrection fern (*Pleopeltis michauxiana*), western tansy mustard (*Descurania pinnata*), western buttercup phacelia (*Phacelia ranunculacea*)…the uncommon plants increased as we went along, and by the end of the day I'd managed to show them a good variety of the species present at Larue-Pine Hills in mid-April. I was at 315 species by April 18, and I decided to just go forth and do my best to accomplish this Botany Big Year. I began to question what else I needed to find. For instance, how on God's green earth do I ID sedges? I still don't feel like I've answered that question sufficiently. I still think I missed so many sedges that I should've tried for more readily.

Small white lady's-slipper (*Cypripedium candidum*)
Observed: May 26, 2019, Chicago Suburban Area

May 2 I drove out into a rainy night and got eastern spadefoot toads (*Scaphiopus holbrookii*), one of my most-wanted species.

May 3 I drove north 2 hours to get a lifer Lewis' woodpecker (*Melanerpes lewis*).

May 4 I got several new plants for *iNaturalist* and my lifelist.

And so on and on it went, a frenzy of completing final exams and chasing target species as everything came to a head. I finished up my time in Carbondale and moved to Champaign for work, as I would be working for the Illinois Natural History Survey doing plant surveys. I also began my quest to dipnet pretty much every fish species I could out of the Vermilion River. I hadn't given up on my quest for plants, though, and on May 18th I got my most-wanted species of all time, yellow-ladies' slipper (*Cypripedium parviflorum*).

May 19th I started in the field, getting a couple of sedges! The summer job got me quite a few more plant species, but also since I was working full-time, and Derek worked in a more biodiverse area, he passed me for plants by July. Still, thanks to him, Jeff Skrentny, Paul Sweet, and others, I got over 650 species of plants by July 1. At the same time, I kept targeting fish, dragonflies, butterflies, reptiles, and amphibians, looking for as many of these as I could possibly find.

A brief trip down to Southern Illinois in early July netted me many ticktrefoils (*Desmodium* species), purple fringeless orchid (*Platanthera peramoena*), and temporary dominance over Derek, but my time was up, as Derek slowly worked his way upwards. At times, I still remained competitive, but I was so interested in the many facets of nature in Illinois that at many other times I didn't end up caring too much how far ahead Derek was. I ended up just targeting species like Kankakee mallow (*Iliamna remota*) and others that I'd always wanted to find.

My summer job ended in September, as the asters bloomed. I photographed many of these, and let my Big Year lapse a little. I kept on photographing everything, of course, as I usually do. A couple more trips through central and northern Illinois got me a few new grasses and seedpod-identifiable species, including Kalm's St. John's-wort (*Hypericum kalmianum*) and Pallas' bugseed (*Corispermum pallasii*). While Derek rallied on New Year's Eve and got a few last-minute species he hadn't observed yet, I ran off to Indiana to look for cranes with friends.

Tips for those doing future Botany Big years:

1. Learn as much as you can beforehand about locations and times. I deeply regret not finding out about Shoal Creek Conservation Area, a privately-owned nature preserve in central Illinois, until 2020.
2. Photograph EVERYTHING. Many of my IDs were not confirmable due to lack of clear photos.
3. If you can only visit five preserves, you're not going to win an Illinois Botany Big Year. That being said, my top picks would be Cache River State Natural Area, Larue-Pine Hills Research Natural Area, Illinois Beach State Park, Forest Glen Preserve, and Volo Bog State Natural Area. However, you need to visit a lot of ecoregions to truly have a good chance at seeing species.
4. Southern Illinois plant species are not documented nearly as well as those in northern Illinois, especially on *iNaturalist*. I encourage spending more time in southern Illinois, purely for the sake of exploration and discovering unrecorded species.

Jared Gorrell is wildlandblogger on iNaturalist. He is an Illinois-based botanist, birder, and herper, though he dabbles in basically everything. He has potentially excessive enthusiasm for Southern Illinois nature in most forms.

A Plane Tree that is Not a Plain Tree

By Bo Dziadyk.

Once in a lifetime does one encounter such a being. It lives on a steep hillside above Mill Creek at the Josua Lindahl Hill Prairies Nature Preserve in the Quad Cities of northwest Illinois. A small group of volunteers first noticed it when we were doing a controlled burn on the nearby hill prairie several years ago. The Lindahl Preserve, owned by Augustana College, is part of the larger Collinson Ecological Preserve dedicated to research, education, and conservation.

What makes this particular sycamore so distinctive is how it has adjusted to adversity—the hallmark of greatness in our minds. Many decades ago a heavy storm probably knocked the tree against the steep hillside so that, still firmly rooted, it was lying appressed to the soil along its entire length. As some trees do when a living stem is pressed against the ground, the inner bark on that side was able to root and provide greater uptake of water and nutrients. Only in this case it was part of the entire bole that so rooted, allowing one large branch to take over as the primary stem and now dominating the entire growth. The original main stem, however, continued to grow outward and upward, keeping pace in length though not in bulk, with the now massive side branch. This side branch is currently 82cm (32 inches) DBH while the main stem is only 58cm (23 inches) DBH. I estimate the full length (height) of the tree to be some 40m (130 feet) tall. If the entire length were standing upright I think the tree might be a contender for the tallest sycamore in Rock Island County and probably among the tallest in all of Illinois.

Platanus occidentalis, the American sycamore or plane tree, is a member of the ancient family Platanaceae. It has two other extant species in the USA, and numerous fossil species have been identified. The family is at least 100 million years old. It was thriving when the great dinosaurs were stalking the earth and survived the great extinction that eliminated them and most other life on Earth.

The sycamore is a deciduous tree growing in ravines, on hillsides, and especially along streams. It is a monoecious species whose globose fruits are sometimes eaten by squirrels when young and by birds at maturity. The seed-like achenes separate from the compound fruit in spring and float on the wind on bristly hairs.

Botanists concede it to be the largest tree east of the Mississippi River reaching more than 120 feet in height and more than ten feet in diameter. The tree may live for over half a millennium.

The American sycamore was the first tree I learned as a wee lad growing up in the 1950s across the Mississippi River from St. Louis. The property next door had a large sycamore with a smaller box elder rooted a few yards away. We kids used to climb one tree and switch to the other. Growing in the deep shade of its neighbor the box elder grew poorly until it was cut down by the property owner. But that plane tree has continued to thrive as I confirm when I drive past that property at least once a year.

Many years later as a biology major at SIU, Carbondale, I took Robert Mohlenbrock's course entitled *Trees, Ferns, and Wildflowers*, and I was hooked. I learned the binomial name of some two dozen forest trees, and the sycamore was one of them. For years I could run through the binomial names of all those species in my mind and that helped germinate my career. The American sycamore is ensconced in my psyche and enshrined in my botanical soul. It is something like my personal totem in the deep woods of home. And that strange, singular tree on the hillside has become a beacon pointing the way for me to do forever what I last hope to do on Earth.

Bo Dziadyk is Professor Emeritus at Augustana University and President of the INPS Quad Cities Chapter.

Web Links & Webinars

Webinar Links to Explore While Staying Home

- *Ecology and Identification of Spring Wildflowers* by Chris Evans: https://www.youtube.com/watch?v=ib6fYtdzehA&feature=youtu.be

  Illinois forests erupt with colorful wildflowers each spring. Extension Forester Chris Evans gives this 1-hour presentation to look at the ecology and identification of common Illinois spring wildflowers. Topics discussed include why these plants flower early, what type of habitat can the best wildflower displays be found in, and a look at a number of the common wildflowers found in Illinois forests.

- *Lunch & Learn* series hosted by the Illinois Environmental Council: https://www.youtube.com/user/ilenviro

  IEC's Lunch and Learn Series is designed to keep the Illinois environmental community connected while we are all doing our part to prevent the spread of COVID-19 by practicing social distancing. Among several videos available are *Make Your Home More Sustainable (while you're stuck there!)*, *Pollinators and Backyard Habitat*, *Bobcats in Illinois*, and many others.

- *Native Shrubs for the Home Landscape, It's for the Birds!*: https://www.youtube.com/watch?v=9wMoquBVMYE

  This 1-hour webinar by Illinois Extension Forestry Technician Kevin Rohling reviews a number of characteristics of desirable native shrubs, their site preferences, and their relative value compared to non-native species for enhancing wildlife value in the home landscape. Several species of native shrubs and small trees and their use by insects, birds, and other wildlife are discussed along with non-native invasive species to avoid or remove.

- *Nature's Best Hope: Conservation That Starts in **Your** Yard:* https://vimeo.com/396957344

  Recent headlines about global insect declines, the impending extinction of one million species worldwide, and three billion fewer birds in North America are a bleak reality check about how ineffective our current landscape designs have been at sustaining the plants and animals that sustain us. Such losses are not an option if we wish to continue our current standard of living on Planet Earth. The good news is that none of this is inevitable. Hosted by the New Canaan Land Trust, this presentation of "An Evening with Doug Tallamy" held on March 3, 2020 has been made available on Vimeo. Doug

discusses simple steps that each of us can—and must—take to reverse declining biodiversity and explains why we, ourselves, are nature's best hope.

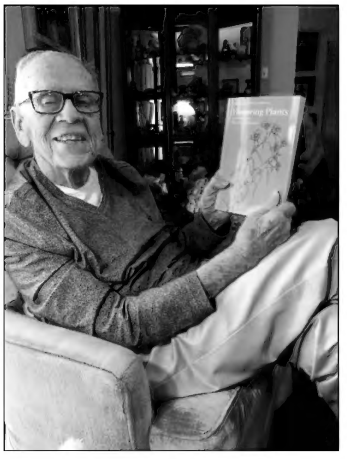
Friends of Illinois Nature Preserves

Announcing the Birth of the Friends of the Illinois Nature Preserves

The Illinois Nature Preserves System is globally famous—the best, precious remnants of some of the temperate world's most productive and diverse biodiversity. But the system is failing, or barely holding its own, in many cases. The system needs support, volunteers, funds, contractors, and more. Many agencies, starting with the Illinois Department of Natural Resources, need to hire nature preserve and natural heritage staff and bump up their budgets. But it starts with support from "we the people."

Read more on the Woods and Prairie Blog and on the Friends' new website at https://www.friendsofillinoisnaturepreserves.org/.

Update on Dr. Mohlenbrock



Recently I had a nice visit with Dr. Robert Mohlenbrock at his home near mine in southern Illinois. He is professor emeritus of botany at Southern Illinois University and the authority on plants in Illinois as author of the *Vascular Flora of Illinois*.

Bob told me he is feeling good at 88 years old and gave me a copy of his latest book in the *Illustrated Flora of Illinois* series, *Asteraceae Vol.2*. It's his 34th book with SIU Press and 80th overall.

We had a really nice visit talking about plants. I showed him a specimen of *Heliopsis gracilis* from Alexander County and a few other plants new to Illinois so he can incorporate them in the 5th edition of the *Vascular Flora of Illinois*! – Chris Benda

Woods, Prairie, and the Puzzling "In Between"

This recent blog post by Stephen Packard uses many photos of Vestal Grove to illustrate the ongoing puzzle of managing communities with "intermediate light levels," and acknowledges INPS-funded research by Dr. Karen Glennemeier in cooperation with the Somme Prairie stewards in Cook County to test some approaches.

New Study Shows How Fires Help Prairie Plants

Until now, it was unclear precisely why and how fires can promote the population health of plants and maintain plant diversity in fire-dependent ecosystems. A 21-year study by Stuart Wagenius, Ph.D., and a team of conservation scientists at the Chicago Botanic Garden's Negaunee Institute for Plant Conservation Science and Action found that burning the prairies helps plants synchronize the bloom time of *Echinacea angustifolia*, commonly known as the narrow-leaved purple coneflower, making it easier for the plants to mate and reproduce. "We found evidence that two things—being closer to potential mates, and flowering at the same time as potential mates—really increase the number of seeds that they produce," said Dr. Wagenius. The study was recently published in the *Proceedings of the National Academy of Sciences* (PNAS). See the Chicago Botanic Garden blog for more information and a link to the study.

British Natural History Museum Declares Planetary Emergency

The British Natural History Museum is the latest institution to declare a "planetary emergency." In a January 20, 2020 publication, the Museum stated that "Climate change, biodiversity loss, habitat destruction, pollution and deforestation are just some of the crises caused by unsustainable human activity. These add up to an emergency on a planetary scale." The Museum is also pledging to do its bit for the planet in a new strategy to 2031.

Rare Moth a Surprise Discovery in Kankakee County

A *Daily Journal* article by Trevor Edmondson, an INPS member, tells the story of logging a moth into the iNaturalist database in August and having it identified in November as *Dichagyris reliqua*, a species only found in a couple dozen locations across North America. Alerted by a Cornell University grad student, Trevor confirmed the identification and notes, "This and other unidentified species from the summer give me something to chew on during the winter to keep that fire burning for other local discoveries." Read the full article here.

Crafting a Cure for Plant Blindness

Plant blindness describes the tendency of people to simply edit plants out of their daily observations. M. Timothy Rabanus-Wallace believes that the plant awareness revolution will be led by poets, philosophers, and hipsters; not just scientists. The benefits of plant appreciation extend far beyond the geeky complexities and global concerns that scientists are—rightly—prone to emphasize. "Turning plants—objects of serene beauty, complexity, calm, and ubiquity—into focal points for familiarity and fascination is a salve that can serve us in almost any place at any time." Read more in this opinion piece in *The Scientist*.

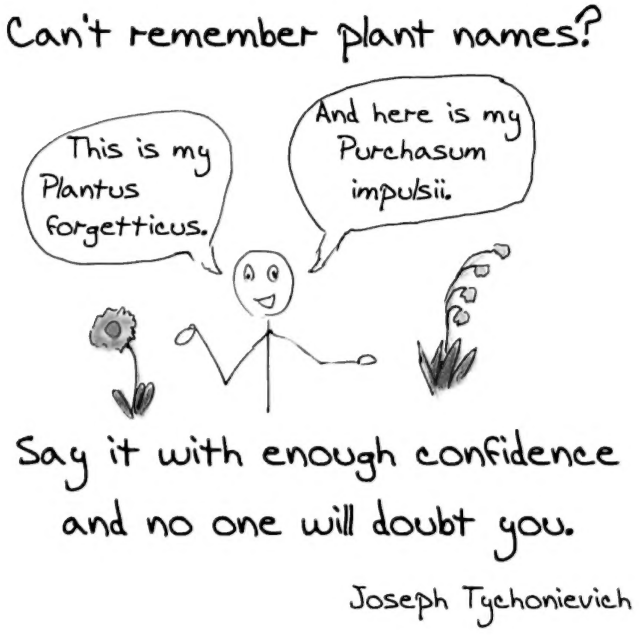
Forensic Ecology: How Pollen Is A Silent Witness To Solving Murders

An interesting profile on BBC.com about Professor Patricia Wiltshire's use of forensic ecology—from pollen to the re-growth of trampled plants—to assist the police in solving many crime cases in the UK over the years.

Finally, A Practical Guide for Roadside Wildflower Viewing

Chris Helzer, aka The Prairie Ecologist, has put together a new guide for those who want to know a little bit more about the wildflowers they see along the roadside but don't want to leave their moving vehicles. *A Field Guide to Roadside Wildflowers at Full Speed*, which is available for free download, is a satirical take on the classic handbook. A scientist for The Nature Conservancy in Nebraska, Helzer began his blog in 2009 intending to serve as a resource for people interested in managing and restoring prairies. He reminds users to "Always use a designated passenger to look up flowers."

Botany Humor



ILLINOIS NATIVE PLANT SOCIETY
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www.ill-inps.org

Wood Betony (*Pedicularis canadensis*). Photo: Kimberlee Hill Blair.

The Harbinger Spring 2020

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